

Application No. 10/803,360
Amendment Dated 1/19/06
Reply to Office Action of 11/30/2005

REMARKS/ARGUMENTS

Applicant acknowledges, with appreciation, the withdrawal of the prior rejection of all of the claims as originally presented, either as being anticipated by Kinoshita et al. (U.S. Patent 5,824,394) or as being obvious in view of Kinoshita et al.

In the previous amendment applicant specified that a very important feature of his invention was that the polymeric base film employed polypropylene as the predominant polymer, and that this base film was employed with a urethane coating on a first side, with the coating being applied to the base film between a machine-direction orientation and a transverse direction orientation of a two-step tentering operation.

In the Final Office Action, the Examiner rejected claims 1 – 24, which are the only article claims in this application, “under 35 U.S.C. 103(a) as being unpatentable over Kinoshita et al. (US Pat. 5,824,394) in view of Posey et al. (US Pat. 4,525,419).”

In rendering the above rejection the Examiner stated his recognition that the teachings in the Kinoshita patent differed from the invention specified in claims 1 – 6, 8, 11 – 17 and 21 – 24 because that reference did not teach that the base film should be predominantly polypropylene. To attempt to overcome this deficiency, the Examiner cited the Posey ‘419 patent, which broadly suggests that the base film of the laminate disclosed therein could be an oriented polyester or polypropylene film, referring to column 3, lines 25 – 30. Based upon this teaching in Posey the Examiner took the position that it would have been obvious to one of ordinary skill in the art to have employed the polypropylene film as taught by Posey as the base film in the Kinoshita structure. To attempt to justify this substitution, the Examiner took the position that Posey teaches that a polypropylene film is an equivalent of a polyester-based film, and therefore to

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substitute one for the other in the Kinoshita structure would be obvious.

Applicant respectfully disagrees with the rejection of the claims predicated upon the combination of Kinoshita and Posey because there is absolutely no motivation for that combination and absolutely no suggestion that a polypropylene film and a polyester-based film would be considered equivalents in the Kinoshita structure.

Moreover, the Posey et al. '419 patent actually teaches that a polyester-based film and a polypropylene film are not equivalent structures for all purposes, as will be explained in detail hereinafter.

In addition, each of the references actually teaches away from making the combination proposed by the Examiner, for the reasons which will now be presented.

The Kinoshita et al. '394 invention is directed to a biaxially oriented laminated polyester film. Kinoshita et al. teach that a layer of an acrylic-based resin or a urethane-based resin can be provided on the surface of a polyester layer A of only a specified composition. There is absolutely no motivation or suggestion that a different polymer can be used in place of the polyester layer A. In fact, Kinoshita et al. specifically state that their invention resides in the use of the specifically disclosed polyester layer A for receiving either an acrylic-based resin or a urethane-based resin coating. In this regard, the Examiner's attention is directed to the paragraph beginning on line 16 of column 2 of the Kinoshita et al. patent, which reads as follows:

"As a result of the present inventors' studies for overcoming the above problems, it has been found that by use of a polyester film having a specific construction, it is possible to remarkably improve adhesiveness of the polyester film layer to any kind of functional layer. On the basis of the finding, the present invention has been attained." (Emphasis

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added.)

Thus, the Kinoshita et al. invention, as disclosed to a person skilled in the art, is that the polyester film layer for receiving either a acrylic-based resin or a urethane-based resin must be a polyester film having the composition specified therein. Thus, the Kinoshita et al. '394 patent actually teaches away from replacing the disclosed base film with a polypropylene base film in the manner proposed by the Examiner.

Although the above-discussed teachings in the Kinoshita et al. '394 patent should put this obviousness issue to rest, let's consider what the Posey et al. '419 patent teaches to a person skilled in the art.

The alleged inventive concept or feature in the Posey et al. '419 patent is the specific primer identified therein. Apparently Posey et al. did not want to limit their invention to the use of only a single base film, in view of the fact that the inventive feature apparently was not in the base film, but rather in the specific copolyester primer coatings described and claimed therein.

The fact that the copolyester primer coatings are the inventive features is specified throughout the Posey et al. patent. For example, Posey et al. state: "In the synthesis of the copolyester primer coatings of this invention" (Column 5, lines 57, 58) (emphasis added); "The copolyester primer coatings of this invention exhibit excellent heat stability" (Column 6, lines 35, 36) (emphasis added); "Plastic film primed with the copolyester composition of this invention has excellent utility as a film base" (Column 6, lines 50, 51) (emphasis added). Moreover, although claim 1 does include a limitation relating to the polymer composition of the plastic film, it also specifically identifies the composition of the copolyester primer coating

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forming a critical part of the disclosed invention.

Moreover, Posey et al. clearly teaches that a polypropylene film and a polyester film are not equivalent films for all purposes. In this regard, the Examiner's attention is directed to Example 28 and Table 2, appearing in columns 13 and 14. In particular, note Table 2 which presents data relating to ink adhesion for four different ink types on various films, including polypropylene and polyester. The "Control" identified in Table 2 is the specific film without the use of any primer. The reference to "Sample" refers to the films with the inventive copolyester primer coatings thereon.

As can be seen in the far right column, which presents data with respect to the use of a polyamide ink type, a polypropylene film without the primer had zero ink adhesion while a polyester film without the primer had 100% ink adhesion. This demonstrates that polypropylene and polyester are not equivalents with respect to ink adhesion, and that they are only recognized as being relatively equivalent with the inventive copolyester primer coating.

The Examiner's attention also is directed to the data relating to the use of Solvent Flexo ink on polypropylene and polyester films, as presented in Table 2. Specifically, although the control for both films had zero ink adhesion, it should be noted that the ink adhesion properties of these two films were different when the inventive copolyester primer coating was employed. Specifically, the ink adhesion on the polypropylene film coated with copolyester primer was 50% and the ink adhesion with the polyester film coated with the copolyester primer coating was 100%. This difference in ink adhesion with the same primer also demonstrates that polypropylene and polyethylene are not equivalent for all purposes.

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It also should be noted that Example 28 is the only example in which a polypropylene film was employed, and in that Example the coatings were added to the completely formed, biaxially-oriented film, offline. In other words, the product was not made by applying the coatings online between the MD and TD orientation steps as required in the present application. Thus, there is absolutely no teaching in Posey et al. that a polypropylene film can or should be provided with any coating applied between the machine direction and cross-machine direction stretching in a tentering operation to achieve superior results, as disclosed in the present application.

In all of the prior twenty-seven (27) examples the film being coated was a polyester film that was coated online with various different polyester coatings. Specifically, Examples 1 – 9 included various different copolyester coatings within the scope of the invention that were applied to a polyester film between the machine direction and transverse direction stretching operations.

Examples 10C - 26C show samples wherein a polyester film was coated with various coatings that were outside the scope of the invention, between the machine direction and transverse direction stretching operations.

Example 27 employed a copolyester primer within the scope of the invention applied online to an amorphous polyester film prior to any stretching. Thereafter, the film was stretched transversely to form a monoaxially oriented film online.

In summary, Examples 1 – 27 employed only a polyester film, and it is only with the use of this film that any coating was applied online.

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Example 28, which is the only example relating to the use of other films, such as polypropylene, does not teach applying the copolyester primer coating online between a machine direction and transverse direction orientation step. The copolyester primer coating was applied to the film offline after the film had been biaxially oriented.

The data generated in Example 28, as shown in Table 2, shows that the important feature of the Posey et al. invention is the use of the specifically claimed copolyester primer coatings and that the particular film utilized had very little effect on ink adhesion when those specific copolyester primer coatings were employed.

There is absolutely no suggestion or teaching in the Posey et al. '419 patent that a polypropylene film and a polyester film will behave the same way with the use of different primers. In fact, Table 2 demonstrates that with the use of a Solvent Flexo adhesive even the use of the inventive copolyester primer coating did not result in the same level of ink adhesion on a polypropylene film and a polyester film.

Thus, in summary, the Posey et al., '419 patent does not establish that a polyester film and a polypropylene film are equivalent for all purposes, thereby refuting the Examiner's position that these films are equivalents.

Moreover, to reiterate, the only potential equivalence disclosed in the Posey et al. '419 patent between polypropylene films and polyethylene films is with respect to the use of the inventive copolyester primer.

In summary, the Posey et al. '491 patent teaches a person skilled in the art that a variety of different polymer films can be employed but only with the specifically disclosed copolyester

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primer coating. Posey et al. also discloses that polypropylene films and polyester films are not equivalent for all purposes; their performance with respect to ink adhesion being directly related to the primer coating being employed. In fact, even with the same primer coating of the claimed invention, ink receptivity with the use of these two films can be different with the use of different adhesives. There is absolutely no suggestion that a variety of different base films could be used with any type of coating other than the specific copolyester coating of the disclosed invention.

On the other hand, the Kinoshita et al. '394 patent, which indicates that a urethane-based resin or an acrylic-based resin can be used as a coating, is specifically limited to employing that coating on a polyester film layer having the specific construction identified therein. Kinoshita et al. actually teaches away from using any film other than the specified polyester film.

The only basis for combining the Kinoshita et al. and the Posey et al. patents in the manner suggested by the Examiner is to employ applicant's own invention as a bridging disclosure. This clearly is improper.

Based upon the above arguments applicant submits that the claims presented for consideration herein set forth patentably novel subject matter and an indication to that effect is respectfully requested.

Respectfully submitted,

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